

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A method to test operating safety of a process control
5 device designed to close or open a pipe of a process system in the event of an
incident comprising a process valve-control element and a pneumatic an actuator
to move the process valve-control element, a position controller in a safety circuit,
the pneumatic actuator being coupled to a control unit that is connected to the
position controller for exchange of control signals, such that the pneumatic
10 actuator can be operated by way of the control unit to move the process valve
control element and the process valve-control element can be moved from an
initial condition to a final condition in the event of an incident by the pneumatic
actuator which is controlled by the control unit, and a test cycle for the process
control device comprising:
- 15 generating a control signal for partial movement of the process valve
control element aided by the position controller;
transferring the control signal from the position controller to the control unit
via a signal connection;
controlling the pneumatic actuator depending on the control signal aided
20 by the control unit to operate the pneumatic actuator for the partial
movement of the process valve-control element from the initial
condition;
detecting, via a measurement device, measurement signals that indicate
the partial movement of the process valve control element from the
25 initial condition; and
returning the process valve control element to the initial condition.

2. (original) The method according to claim 1, further comprising:

detecting time-resolved path signals upon detection of the measurement signals with the aid of the measurement device.

3. (previously presented) The method according to claim 2, further comprising:

5 determining movement parameters from the detected time-resolved path signals.

4. (original) The method according to claim 1, further comprising:

10 executing a leakage measurement upon detection of the measurement signals, aided by the measurement device.

5. (original) The method according to claim 1, further comprising:

15 electronically logging of a course of the test cycle and electronically storing the course in a storage device.

6. (original) The method according to claim 1, further comprising:

 activating the test cycle for the process control device utilizing a remote control.

20 7. (currently amended) The method according to claim 1, further comprising:

 partially venting the pneumatic actuator, ~~which is a pneumatic actuator,~~ to partially move the process valve control element ~~control element~~ as a reaction to the controlling by the control unit.

25 8. (currently amended) The method according to claim 1, further comprising:

partially hydraulically operating the actuator, which is a hydraulic actuator,
to partially move the process valve control element as a reaction to
the controlling by the control unit.

5 9. (currently amended) A device to test the operating safety of a process control
device designed to close or open a pipe of a process system in the event of an
incident, comprising:

a process valve control element;

an actuator to move the process valve control element;

10 a position controller in a safety circuit;

a control unit that is connected with the position controller configured to
exchange control signals and is coupled to the actuator, such that
the actuator can be operated via the control unit to move the
process valve control element in order to move the control element
15 from an initial condition to a final condition in the event of incident
~~with the aid of a controlling of the actuator by the control unit;~~

a measurement device configured to acquire measurement signals that
indicate a movement of the process valve control element from the
initial condition;

20 the position controller comprising a control signal generator configured to
generate a control signal for a partial movement of the process
valve control element in the course of a test cycle for the process
control device, and to transmit the control signal via a signal
connection from the position controller to the control unit.

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10. (original) The device according to claim 9, wherein the control unit and the
position controller are redundantly coupled to the actuator to operate the
actuator.

11-12. (cancelled).

13. (currently amended) The device according to claim 9, wherein the measurement device comprises a motion sensor configured to detect the partial
5 movement of the process valve control element.

14. (currently amended) The device according to claim 9, wherein the measurement device comprises a sound sensor configured to detect the partial movement of the process valve control element.

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15. (original) The device according to claim 9, further comprising:
a suppression device to suppress the generation of the control signal for the partial movement of the actuator in the course of the test cycle.

15 16. (original) The device according to claim 9, further comprising:
a storage device configured to store electronic information concerning the test cycle.

17. (currently amended) The device according to claim 9, further comprising:
20 an evaluation device configured to automatically evaluate the measurement signals that indicate a movement of the process valve control element from the initial condition.

18. (new) The method according to claim 1, wherein the detecting is performed
25 as a direct detecting of the process valve and the measurement signals are directly taken from the process valve.

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19. (new) The method according to claim 1, wherein the measurement device is located between the control element and the actuator.